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#### DEVELOPMENT OF MULTIPLE RESILIFERS IN *LOPHA (ACTINOSTREON) DILUVIANA* (LINNÉ) FROM THE UPPER CRETACEOUS OF SOUTH INDIA

A SINGLE left valve of *Lopha (Actinostreon) diluviana* (Linné) showing multiple resilifers was collected from brownish calcareous sandstone of Trichinopoly group occurring at Anaipadi (11° 06' 78" 56' 30").

Though this species is fairly abundant both in the Utatur and the Trichinopoly groups at many localities<sup>1</sup>, the phenomenon of the development of multiple resilifers is a rare one. Except this solitary individual all other specimens in our collection represent normal individuals with a single resilifer.

Ligamental area of this variant is abnormal in being very broad and nearly as tall as the rest of the valve height. Though the umbonal area and much of the posterior portion of the ligamental area is damaged, the undamaged portion bears at least five resilia which must have been functioning till the animal was living. Splitting of the resilifer areas is extremely irregular. One of the areas (*i.e.*, second from the anterior side) ends abruptly by joining midway with the adjacent area. All the areas have different widths.

A similarity between this specimen and a specimen of *Lopha semiarmata* (Bose)<sup>2</sup> from the Cardenas Formation (Maastrichtian) of Cardenas, San Lui Potosi State, Mexico, is that both these specimens have unusually thick shell walls and very tall ligamental area. The shell wall of the present South Indian specimen is nearly seven cm thick and has its ligamental area nearly six cm high.

Above commonness in characters of these abnormal individuals is very significant, as it further strengthens Lycett's view<sup>3</sup> that such variants are

developed as a result of monstrosity. This explanation of Lycett is acceptable as unusually heavy shells formed due to monstrosity would need a sufficiently strong ligamental area to operate effectively the opening and closing of the valves. Hence, such stray monstrous variants have very tall and broad ligamental areas with multiple resilia.



FIG. 1. LV of *Lopha (Actinostreon) diluviana* (Linné) showing multiple resilifers,  $\times 0.80$  (Sp. No. MACS G 666).

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